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(c) said actuator adapted to receive said signal and to actuate a part of said robot in response to said user input exceeding a defined threshold;

(d) wherein said sensor is in wireless communication with said robot.

Please amend claim 16 as follows:

16. (Amended) A method for controlling a robotic apparatus comprising:

(a) reading sensor data in communication with said apparatus;

(b) processing sensor data;

(c) transmitting said sensor data over a wireless connection from said sensor to a receiver in communication with said apparatus;

(d) parsing said sensor data;

(e) activating an actuator of said robot in response to said parsed data; and

(f) interacting with said apparatus in a dynamic feedback control system.

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Please amend claim 43 as follows:

43. (Amended) A wireless signal communication system comprising:

(a) a sensor in remote communication with an actuator;

(b) a power control module;

(c) a transceiver;

(d) a central processing unit; and

(e) a dynamic control system between said sensor and said actuator adapted to enable control of said actuator in response to feedback communicated to said sensor.

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REMARKS

Prior to examination, the Examiner is respectfully requested to consider the foregoing

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amendment and to acknowledge such consideration in the next Office Action.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made." No new subject matter has been placed in the pending application. In view of the forgoing amendments and remarks, it is submitted that all of the claims remaining in the application are now in condition for allowance and such action is respectfully requested. Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that she be contacted at the number indicated below.

For the reasons outlined above, withdrawal of the rejection of record and an allowance of this application are respectfully requested.

Respectfully submitted,

By: _____

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Date: February 21, 2003

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Application No.: 10/085,821

Version with Markings To Show Changes Made

In the Specification:

The paragraph beginning at page 3, line 4 has been amended as follows:

-- A first aspect of the invention is a robotic apparatus comprising a controller adapted to process a signal to an actuator. The apparatus includes a dynamic feedback control system between a user and the robotic apparatus. The control system includes a sensor in communication with a user. The sensor senses input of the user and communicates the sensor signal with the robot. The actuator of the robot is adapted to receive the signal and to actuate a part of the robot in response to the user input when the user input exceeds a threshold. The user input may be physical such as body movement or voice. The sensor and actuator are in wireless communication. Furthermore, the sensor may be secured to a user or secured to a console remote from both the user and the actuator of the robot. The apparatus may also include a computer to store sensor data. The computer may be internal to the robot, internal to the sensor, or external from the robot. The apparatus may also include an operator interface to modify configuration of the robot, to select an interactive mode of operation between the robot and the user, and to allow an operator to evaluate user input. In addition, the operator interface may enable the operator to program a unique interactive mode of operation of the robot and the user. The operator interface may be accessible from a location remote from the robot and the user. The robot may be a physical apparatus, or it may be virtual.--

The paragraph beginning at page 3, line 19, has been amended as follows:

-- A second aspect of the invention is a method for controlling a robotic apparatus. The method includes the steps of reading a sensor data in communication with the robot, processing sensor data, transmitting the sensor data over a wireless connection from the sensor to a receiver in communication with the robot, parsing the sensor data, and activating an actuator of the robot

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in response to the parsed data, and interacting with the apparatus in a dynamic feedback control system. The step of processing the sensor data may include processing physical input signals from the sensor being monitored and may include functions selected from the group consisting of: analog to digital converting, compressing, mapping, thresholding, filtering, or pattern recognition. The method may include the step of directly transmitting the sensor data to the robot for controlling the actuator of the robot in real-time. The step of parsing the data may include functions selected from the group consisting of: analog to digital converting, de-compressing, de-crypting, mapping, thresholding, filtering, or pattern recognition. In addition, the method may include recording the sensor data for review at a subsequent time, or to play the sensor data at a subsequent time with the robotic apparatus. The recorded data may be accessed from a remote location for evaluation purposes, or to play the data in conjunction with the robotic apparatus. The method may also include providing interactive communication between the sensor and the robot. In addition, the method may also enable the configuration of the robot to be modified through an operator interface, either locally or remotely through a networked computer in communication with the robot or a remote console.--

The paragraph beginning at page 4, line 23, has been amended as follows:

– A fourth aspect of the invention is a signal communication system. The system includes a wireless sensor in communication with an actuator, a power control module, a transceiver, ~~and~~ a central processing unit, and a dynamic control system between the sensor and the actuator. The control system is adapted to enable control of the actuator in response to feedback communicated to the sensor. The central processing unit and transceiver may be adapted to receive and process sensor data and to transmit the data to the actuator. The system preferably includes a plurality of wireless sensors in communication with a single central processing unit. The physical sensors may be physically connected. In addition, the system may include multiple processing units with each unit having a plurality of connected sensors. –

The paragraph beginning at page 28, line 23, has been amended as follows:

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-- Fig. 27c is a graphical illustration ~~865~~ 880 of a third mapping example between user controls ~~868~~ 882, a game or story environment ~~869~~ 883, and the robotic apparatus ~~870~~ 884, wherein the control of the robot is shared between the user and the game/story environment. In particular, the game/story environment controls the robot's speaker output, head movements, left arm, and left wheel. This mapping example can be used to play simple games, such as telling the user to replicate the robot's left arm and wheel movements by activating sensors to ~~movement~~ control the robot's right arm and wheel movements. A second simple game example is to tell the user to execute a movement, then the game environment mirrors the movements when they are correct. Accordingly, in this mode of operation, the game/story and the user each have limited control of the physical controls of the robotic apparatus and the game/story controls the auditory functioning.--

The paragraph beginning at page 34, line 9, has been amended as follows:

-- As shown in Fig. 31, the operator may make adjustments to the sensors and motors of the robotic apparatus prior to or during a session. Fig. 32 is an illustration of a graphical user interface ~~1282~~ 1280 presented to the user upon selection of link 1262 or link ~~1261~~ 1271 in Fig. 31. This graphical user interface ~~1282~~ 1280 provides the operator the opportunity to adjust the settings governing the relationship between the robotic apparatus, the user, and the assessment environment. In particular, the operator is presented with a link to set mapping protocols between the sensors and motors 1282, a link to set thresholds and gains associated with the sensors and motors 1284, and a link to calibrate the sensors and motors 1286. Each of these links are discussed above and shown in the associated drawing figures.--

In the Claims:

Claim 1 has been amended as follows:

1. (Amended) A robotic apparatus comprising:

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(a) a robot comprising a controller adapted to process a signal to an actuator;

(b) a dynamic feedback control system between a user and said robot, said control system having a sensor in communication with a said user to sense input of said user and to communicate a signal of said sensor with said robot; and

(c) said actuator adapted to receive said signal and to actuate a part of said robot in response to said user input exceeding a defined threshold;

(d) wherein said sensor is in wireless communication with said robot.

Claim 16 has been amended as follows:

16. (Amended) A method for controlling a robotic apparatus comprising:

(a) reading sensor data in communication with said apparatus;

(b) processing sensor data;

(c) transmitting said sensor data over a wireless connection from said sensor to a receiver in communication with said apparatus;

(d) parsing said sensor data; ~~and~~

(e) activating an actuator of said robot in response to said parsed data~~.~~; and

(f) interacting with said apparatus in a dynamic feedback control system.

Claim 43 has been amended as follows:

43. (Amended) A wireless signal communication system comprising:

(a) a sensor in remote communication with an actuator;

(b) a power control module;

(c) a transceiver; ~~and~~

(d) a central processing unit~~.~~; and

(e) a dynamic control system between said sensor and said actuator adapted to enable control of said actuator in response to feedback communicated to said sensor.

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